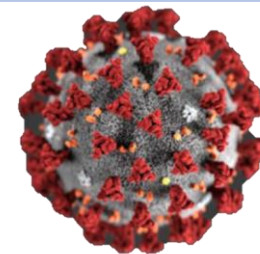


New Hampshire Coronavirus Disease 2019 Weekly Call for Healthcare Providers and Public Health Partners



June 10, 2021

*Ben Chan
Elizabeth Talbot
Beth Daly
Lindsay Pierce*

Thursday noon-time partner calls will focus on science, medical, and vaccine updates geared towards our healthcare partners

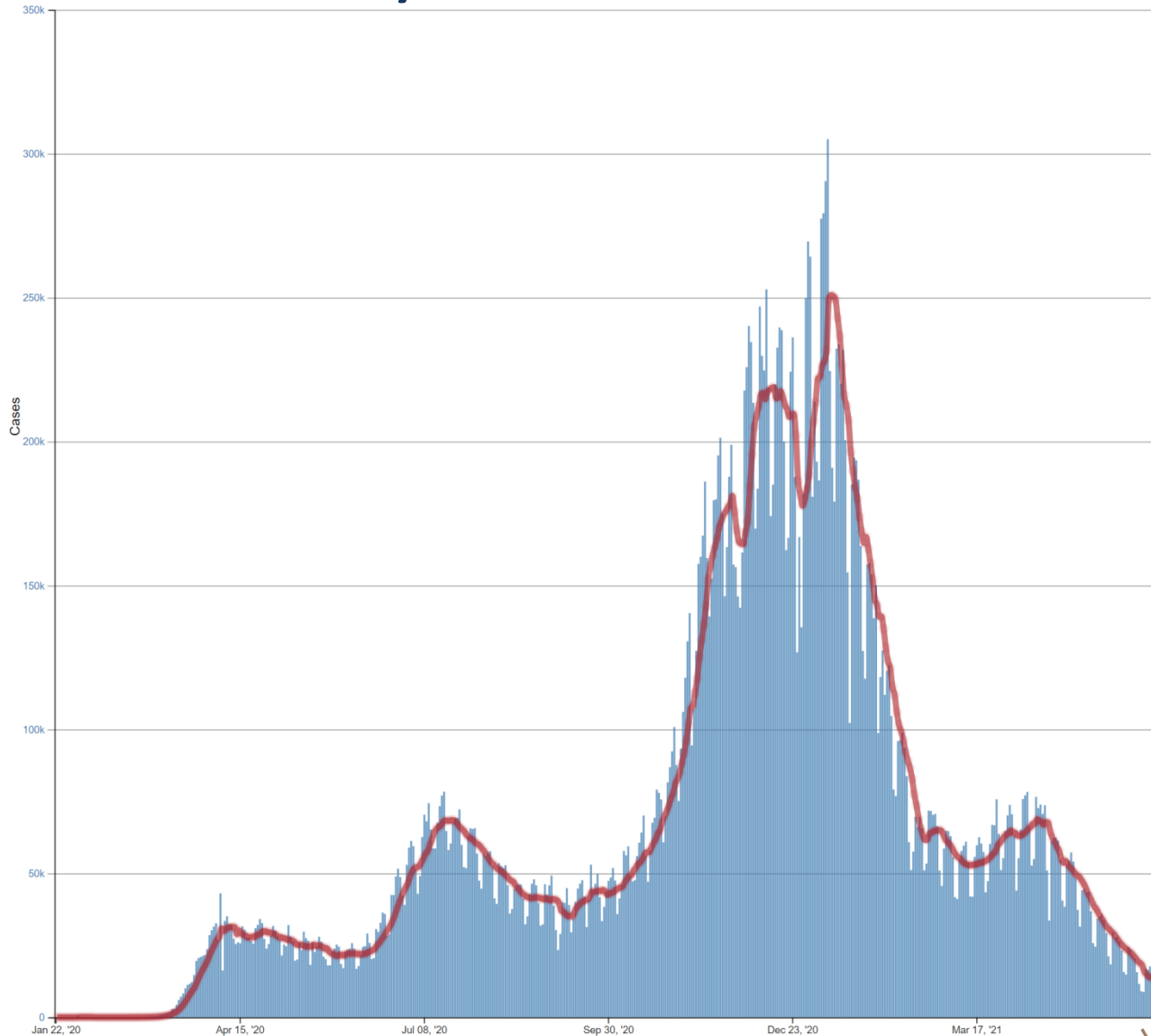
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Agenda

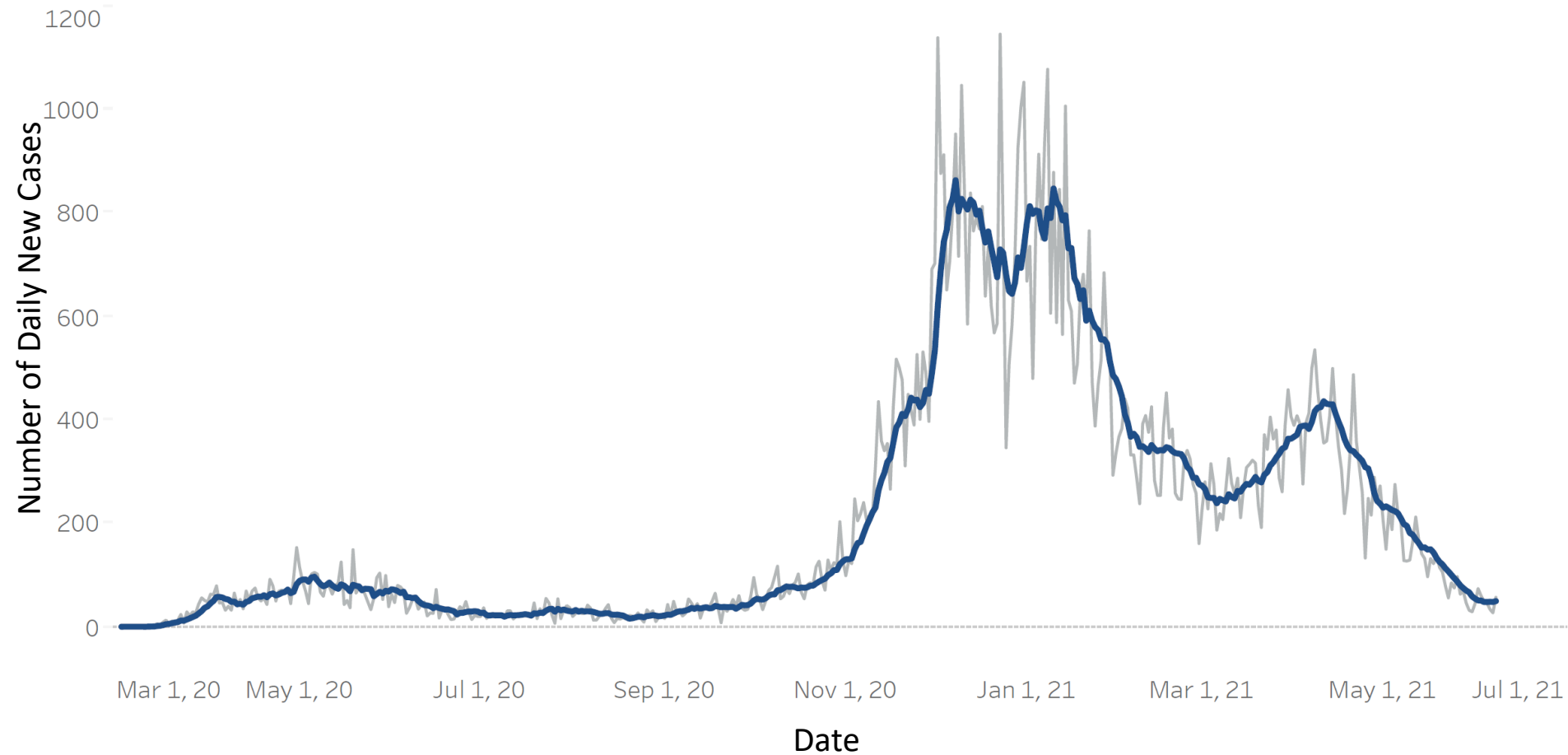
- Epidemiology update
- B.1.617.2 variant of concern/interest (“delta” variant)
- Healthcare worker burnout
- Questions & Answers (Q&A)

U.S. National Daily Incidence of COVID-19



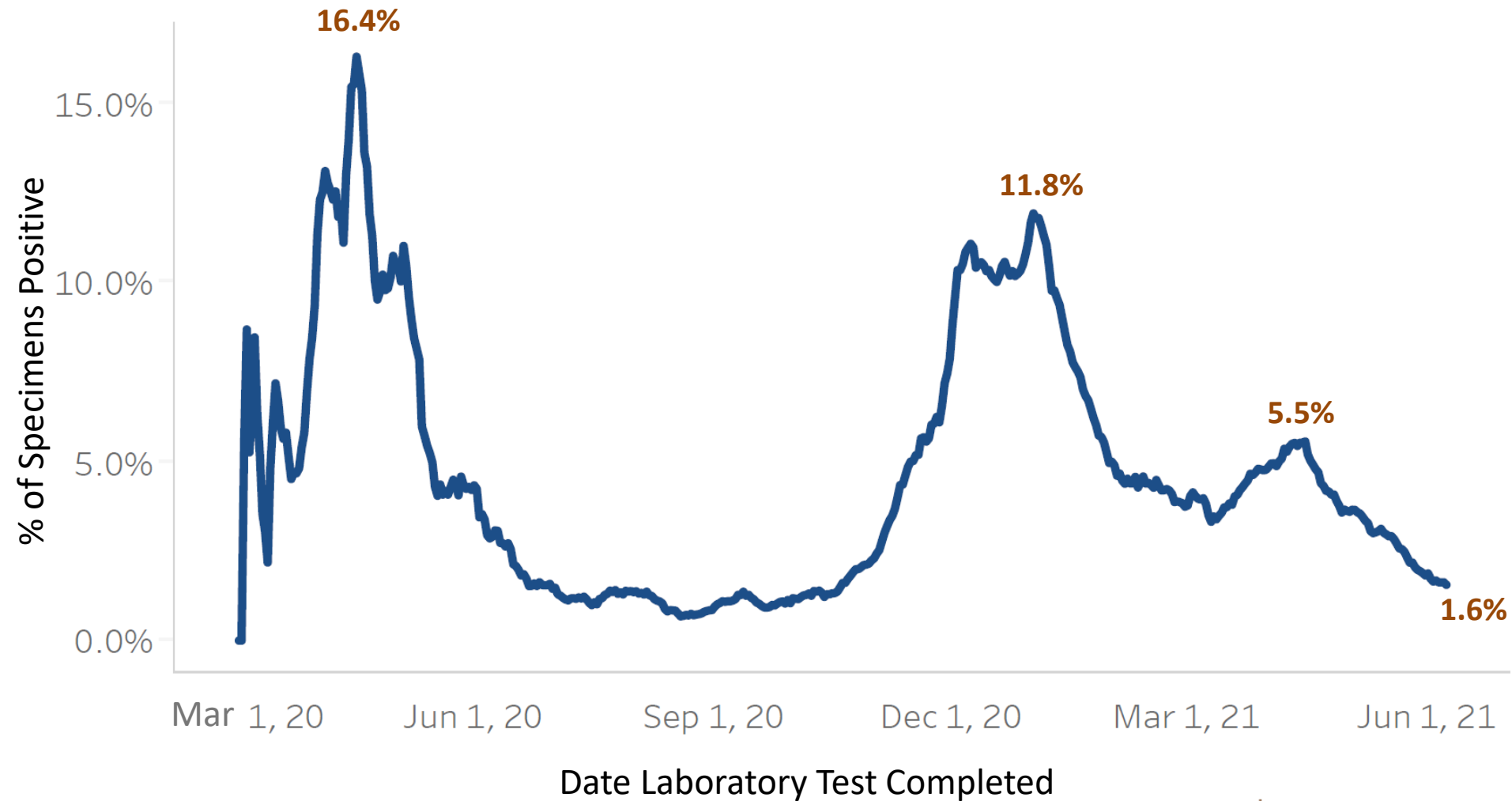
https://covid.cdc.gov/covid-data-tracker/#trends_dailytrendscases

Number of New COVID-19 Cases per Day in NH

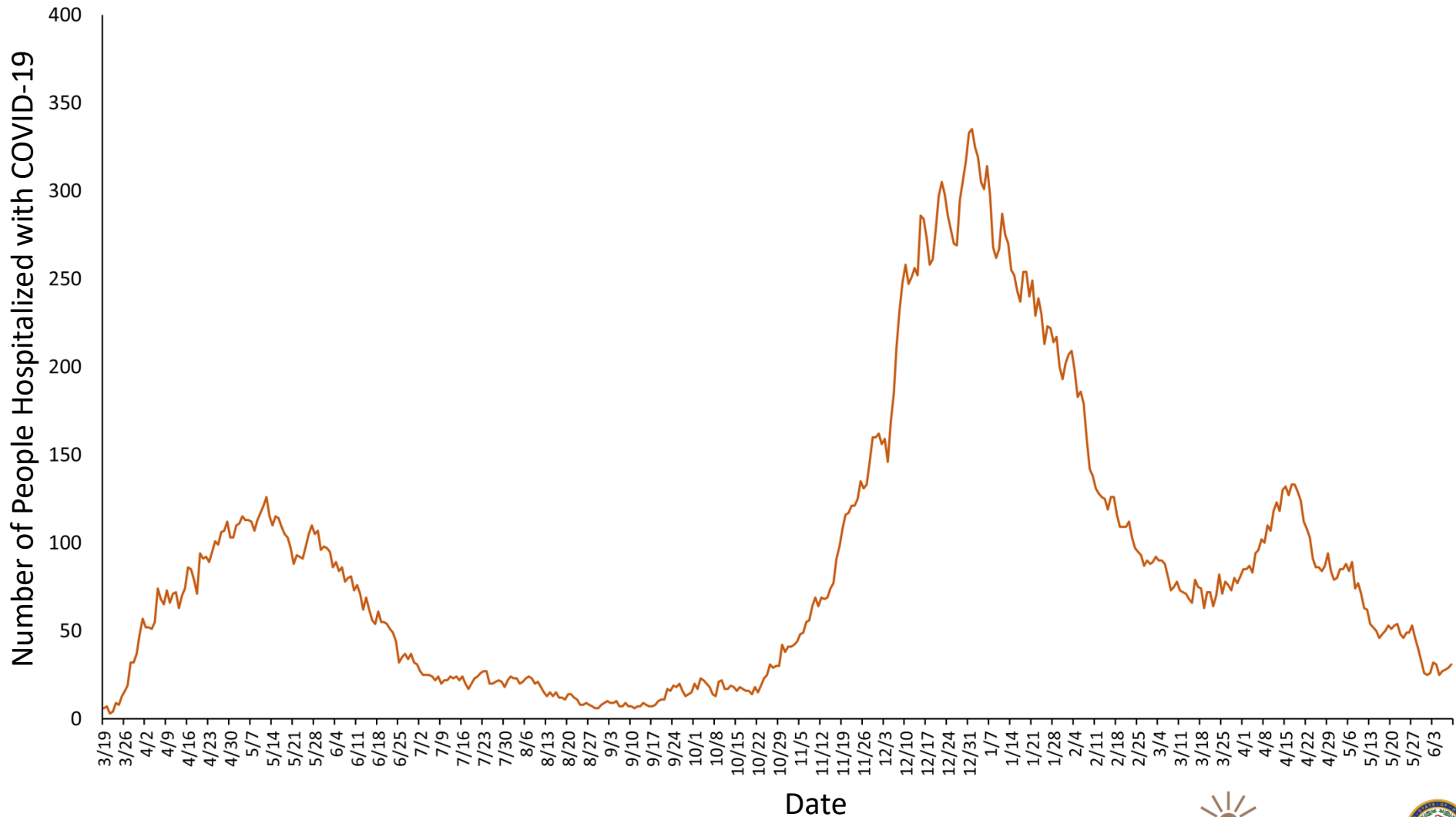


<https://www.nh.gov/covid19/dashboard/overview.htm#dash>

% of Tests (Antigen and PCR) Positive for COVID-19 (7-Day Average)

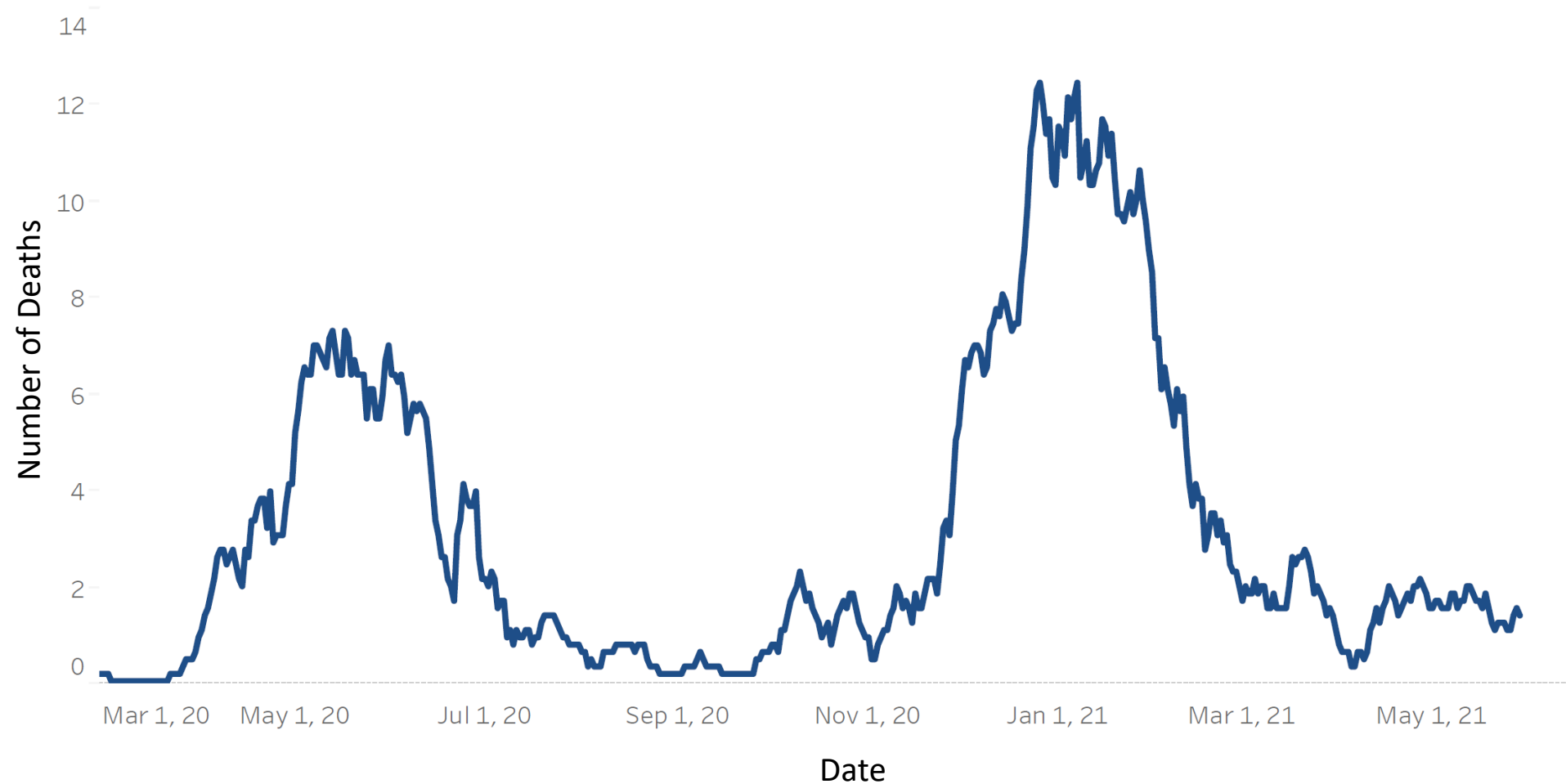


Number of People Hospitalized with COVID-19 Each Day in NH (Hospital Census)



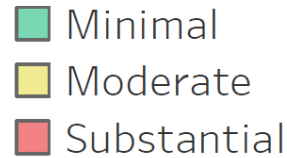
<https://www.nh.gov/covid19/dashboard/overview.htm#dash>

Average Number of COVID-19 Deaths per Day in NH (Based on Date of Death)



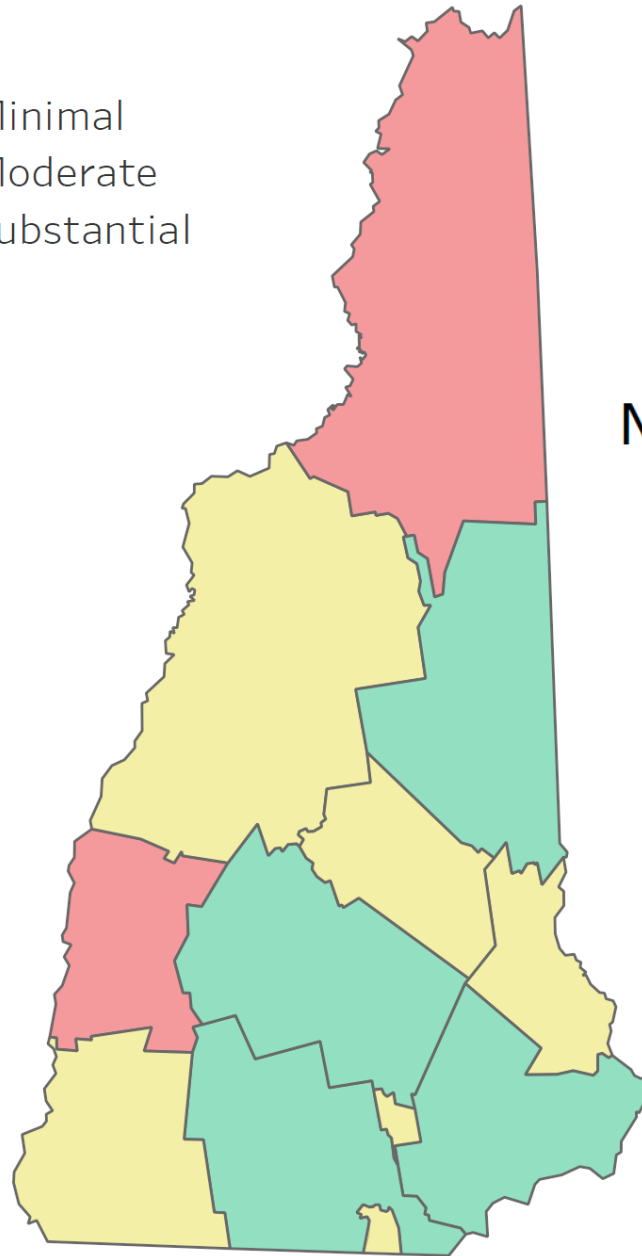
<https://www.nh.gov/covid19/dashboard/overview.htm#dash>

Level of Community Transmission



Statewide
Level of
Transmission

Moderate



New Cases per 100k
over 14 days

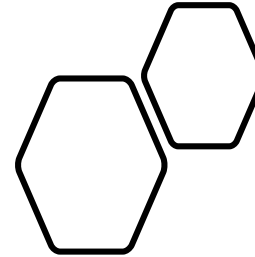
53.6

7-Day Total Test
Positivity Rate

1.6%

Data as of: 6/9/2021

<https://www.covid19.nh.gov/dashboard/schools>



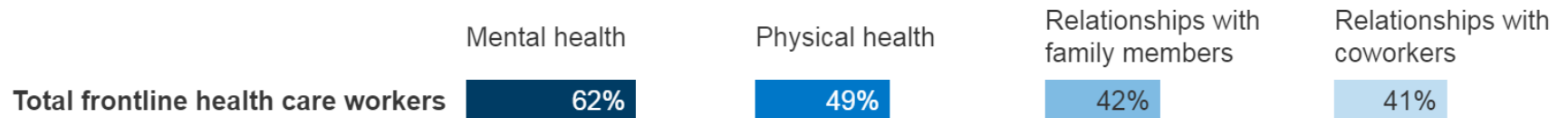
Climate crisis
Health care delivery in conflict/crisis
Health care equity
Access to treatments
Infectious diseases control
Epidemic preparedness
Unsafe products
Underinvestment in health workers
Adolescent safety
Improving public trust of HCWs
Capitalizing on tech advancements
Threat of AMR
Water, sanitation and hygiene (WASH)

Jan 2020

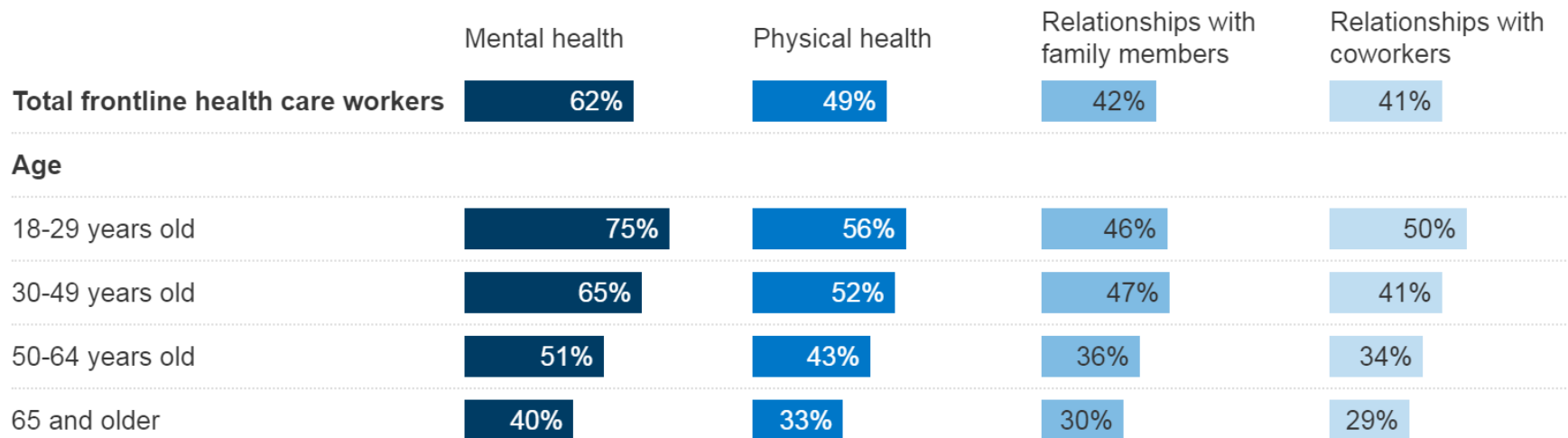
[WHO Urgent Health
Challenges for
Decade](#)

Impacts to U.S. HCWs

- [WP/KFF poll in 1,327 US frontline HCWs](#) Feb 11 - Mar 7
 - 55% said they are burned out
 - 61% said pandemic stress has negatively impacted their mental health
 - 3 in 10 have considered leaving their profession, fueled by burnout, trauma, and disillusionment
- Respondents cited
 - Worry about getting infected or infecting others
 - Lack of equipment to protect themselves or treat patients
 - Guilt and trauma over patient deaths
 - Frustration with governments and some in the public for refusing to enforce or take basic risk mitigation precautions

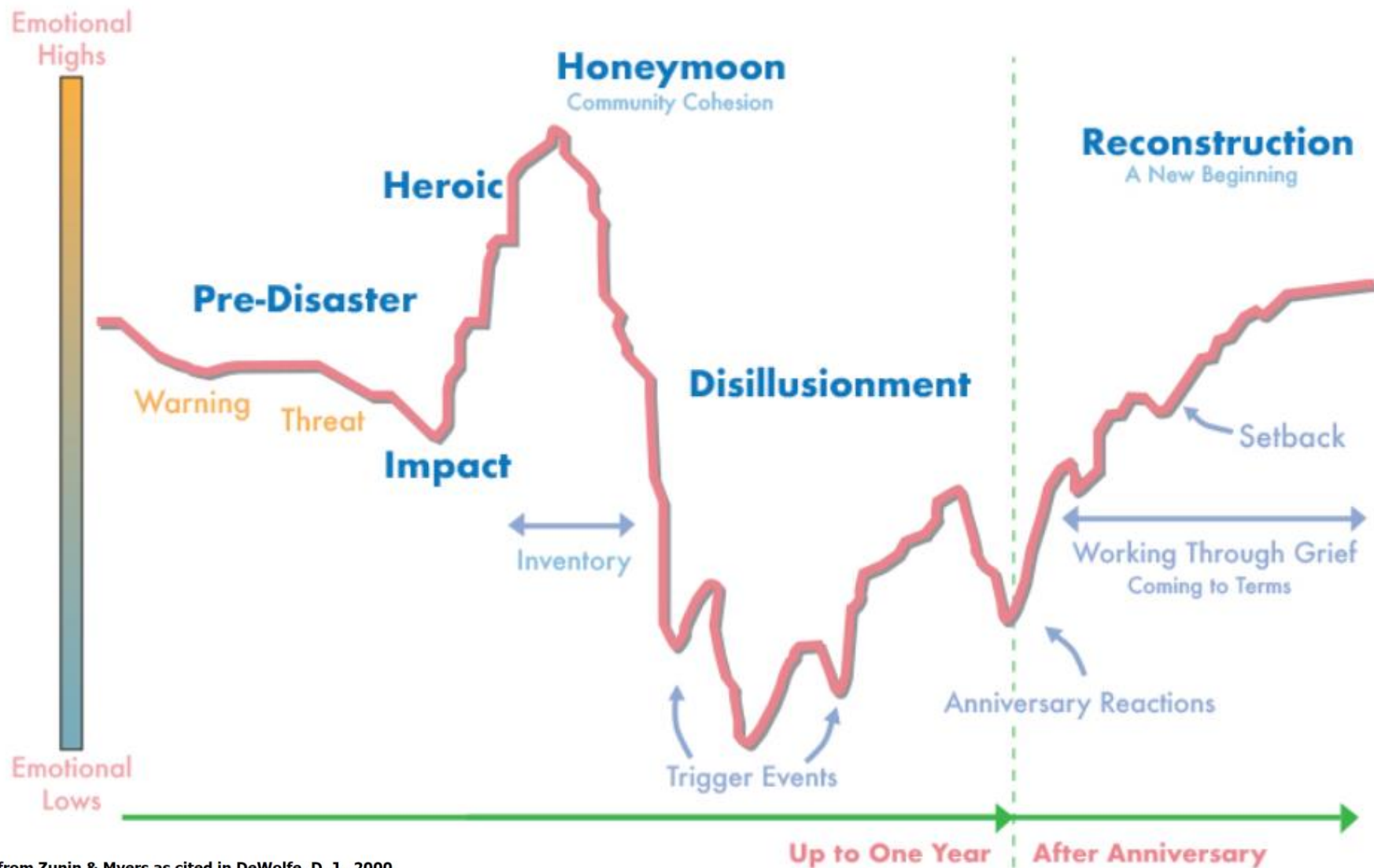


Negative Impacts of COVID-19 on HCWs




Negative Impacts of COVID-19 on HCWs

Yet, 76% of respondents said they feel “hopeful,”
Two-thirds said they remain “optimistic” about going to work



Adapted from Zunin & Myers as cited in DeWolfe, D. J., 2000.
Training manual for mental health and human service workers in
major disasters (2nd ed., HHS Publication No. ADM 90-538).
Rockville, MD: U.S. Department of Health and Human Services,
Substance Abuse and Mental Health Services Administration,
Center for Mental Health Services.



Lessons to Maintain U.S. HCW Workforce

Pandemic exposed and magnified how ill-equipped the nation's health system is to deal with public health emergencies

Even prior to pandemic US faced shortage of doctors and nurses and additional losses to staffing could further harm US health care by making it more expensive, less accessible, and lower in quality

Highlights the importance of addressing mental health to prevent post-traumatic stress, anxiety, depression, substance use, or suicide

Because many HCW suffer in silence, important to create accessible mental health programs

The Rise of the Variants

Viral adaptations to host selective pressures result in more efficient transmission

COVID-19
IMPACT

VARIANT CASES IN NH

1,102



ALPHA
(UK)

1

BETA
(S. AFRICA)

11

DELTA
(INDIA)

105

EPSILON
(CALIFORNIA)

150

GAMMA
(BRAZIL)

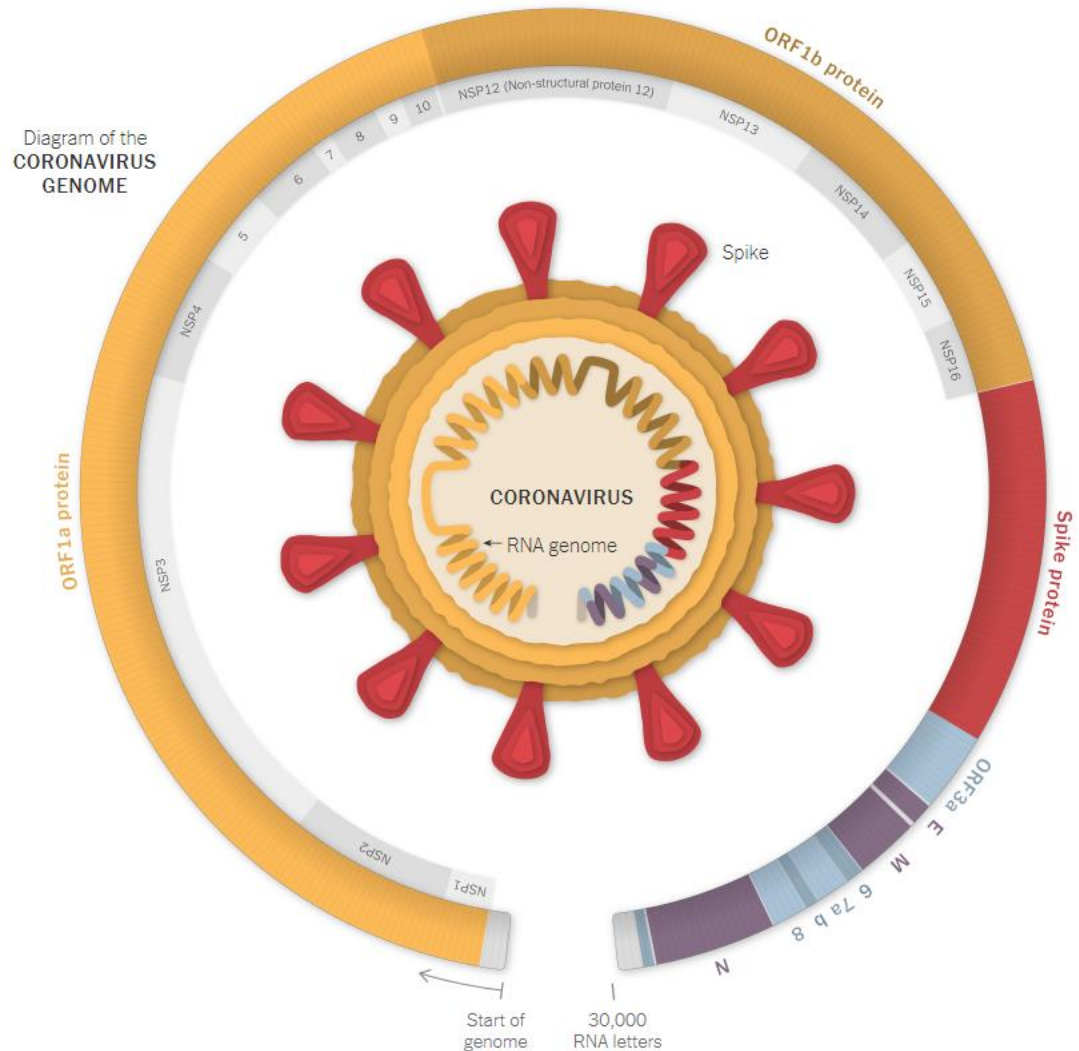
COVID-19
IMPACT

11 CASES OF DELTA VARIANT FOUND IN NH;
HEALTH OFFICIALS URGE VACCINATIONS



SARS-CoV-2 Variants

- A variant has one or more mutations that differentiate it from other variants in circulation
- Variants of original Wuhan-hu-1 strain have been emerging and circulating around world throughout pandemic
- Viral mutations and variants are monitored through sequence-based surveillance, lab studies, and epi investigations



Nomenclature for Variants

Variants of interest (VOI): genetic markers that could potentially affect transmissibility, disease severity, or susceptibility to vaccines or therapeutics

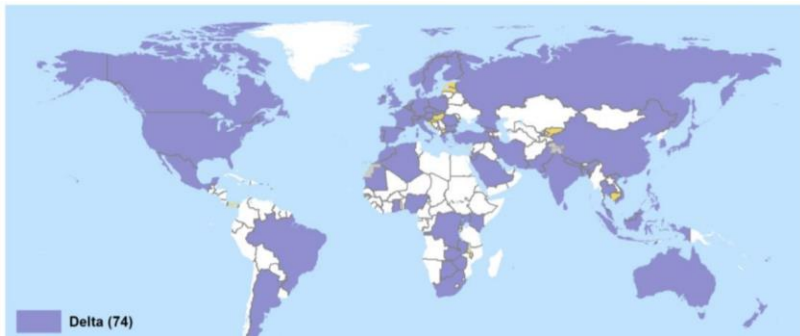
Variants of concern (VOC) evidence of increased transmissibility, disease severity, or reduced susceptibility

Variants of high consequence (VOHC) clear evidence of reduced effectiveness for risk mitigation measures or medical countermeasures: none yet

All vaccines available in US protect against severe disease and death for all these variants

May 31 WHO Announced Name Change

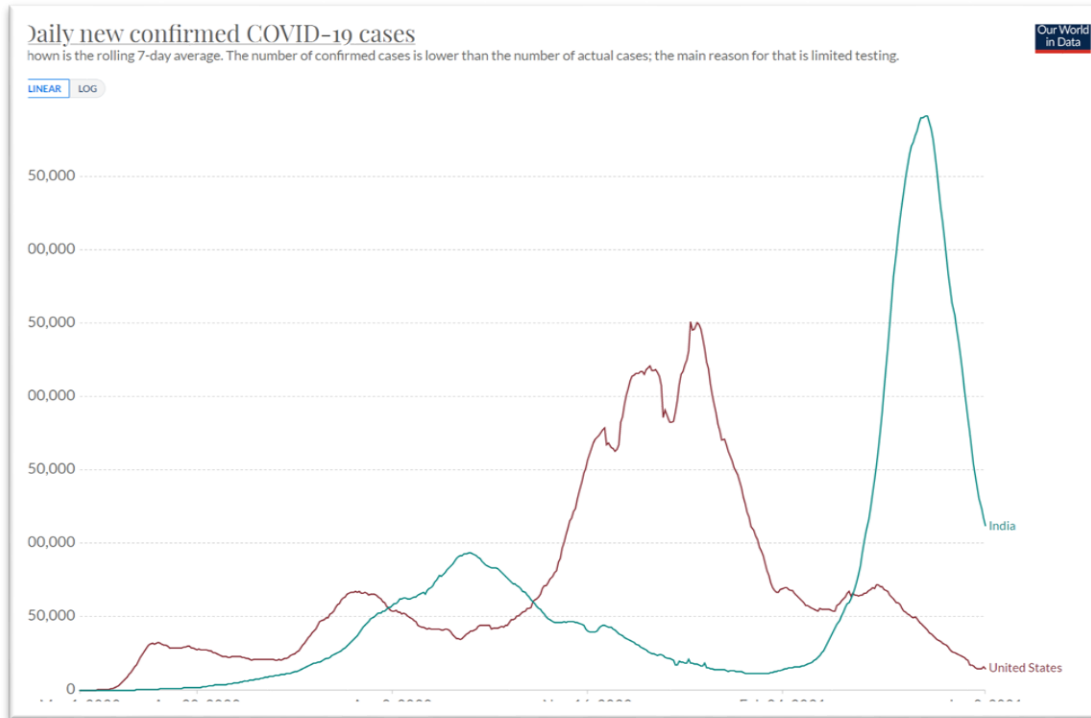
[WHO Situation Report 8 June](#)



WHO label	Pango lineage	GISAID clade	Nextstrain clade	Earliest documented samples
Variants of Concern (VOCs)				
Alpha	B.1.1.7	GRY (formerly GR/501Y.V1)	20I/501Y.V1	United Kingdom, Sep-2020
Beta	B.1.351	GH/501Y.V2	20H/501Y.V2	South Africa, May-2020
Gamma	P.1	GR/501Y.V3	20J/501Y.V3	Brazil, Nov-2020
Delta	B.1.617.2	G/452R.V3	21A/S:478K	India, Oct-2020

Note CDC still classifies Delta as VOI not VOC

WHO Situation Report 8 June



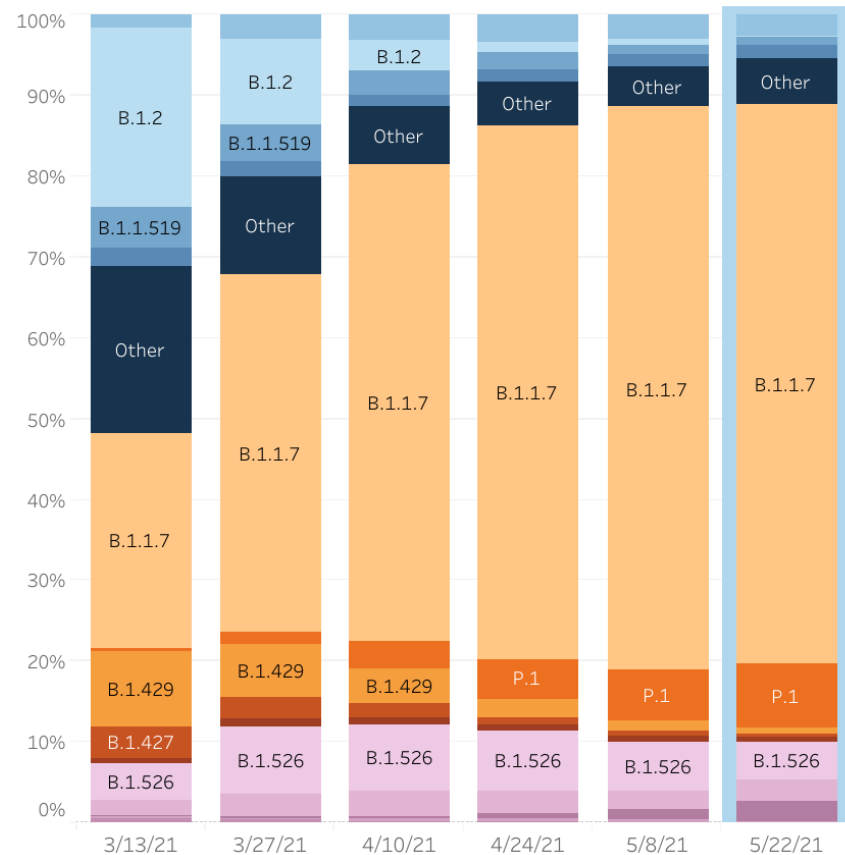
WHO label	Delta
Transmissibility	Increased transmissibility and secondary attack rate ^{3,4,5}
Disease severity	Not confirmed, possible increased risk of hospitalization ⁵
Risk of reinfection	Reduction in neutralizing activity reported ²⁰
Impacts on diagnostics	None reported to date
Impacts on vaccine efficacy/effectiveness	<p>Protection likely against disease; very limited evidence on only two vaccines</p> <ul style="list-style-type: none"> • Symptomatic Disease: <ul style="list-style-type: none"> No/minimal loss: Pfizer BioNTech-Comirnaty, AstraZeneca- Vaxzevria.³⁸ Minimal/modest loss: <i>single dose</i> of PfizerBioNTech-Comirnaty, AstraZeneca-Vaxzevria³⁸
Impacts on neutralization by vaccine	<ul style="list-style-type: none"> • Modest/moderate loss: Pfizer BioNTech Comirnaty, Bharat-Covaxin^{60,78,79} (Note: sublineage of B.1.617 not specified in Bharat-Covaxin study) • Substantial loss: <i>single dose</i> of AstraZeneca-Vaxzevria⁷⁸

Delta Variant Emergence

- >80 countries
- >60% of infections in UK
- As of June 9, >6% of infections in US
 - As high as 18% in some Western US states



Variant Proportions in the U.S.



<https://www.cdc.gov/coronavirus/2019-ncov/cases-updates/variant-proportions.html>

Tracking VOCs in New Hampshire



Delta Emergence in UK

Potential for a new wave threatening their scheduled reopening June 21

Daily new confirmed COVID-19 cases per million people

Shown is the rolling 7-day average. The number of confirmed cases is lower than the number of actual cases; the main reason for that is limited testing.

LINEAR LOG

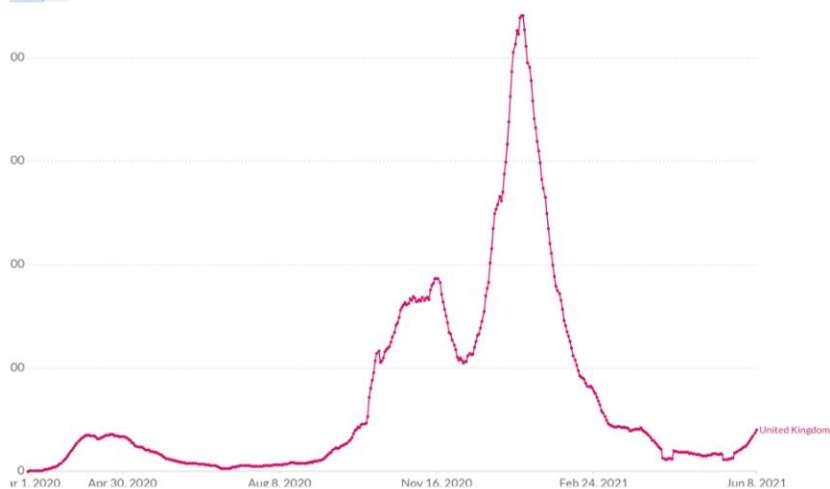
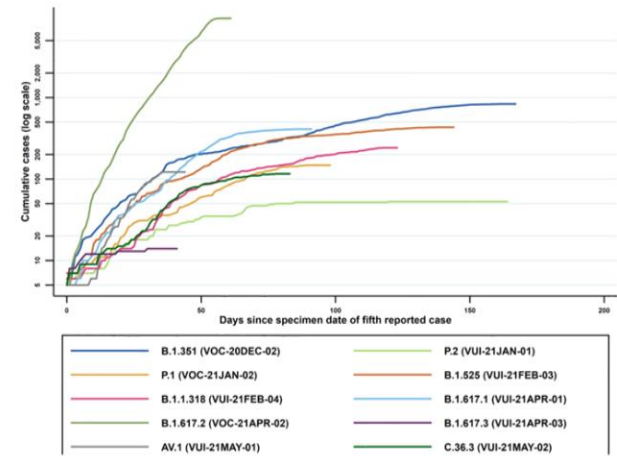


Figure 2. Cumulative cases in England of variants indexed by days since the fifth reported, data as of 31 May 2021. Find accessible data used in this graph in [underlying data](#).

Figure 2 demonstrates the rapid identification of Delta cases over a short period of time.



Public Health England Tech Brief 14

Comparing Delta and Alpha Cases in UK

- 1 Oct – 31 May case fatality rate Delta 0.2% vs Alpha 2%
- 29 Mar to 20 May showed Delta variant associated with
 - Possible increased risk of hospitalization
 - Hazard ratio 2.61, 1.56-4.36
 - Increased risk of ED or hospitalization within 14d of specimen collection
 - Hazard ratio 1.67, 1.25-2.23
- 29 March to 11 May found secondary attack rate higher among contacts of Delta cases compared to Alpha
 - 2.6% vs 1.6% among contacts of cases that travelled (deflation)
 - 12.4% vs 8.2% among close named contacts of cases that did not travel
 - 13.6% vs 9% among HHC that did not travel or unknown

Public Health England Tech Brief 14

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June 8 Announcement re: Delta

Dr. Fauci's Summary

- More severe disease
- Higher risk of hospitalization
- US vaccines show effective

[Public Health England May 22](#)

- 2 doses of Pfizer 88% effective against symptomatic disease from Delta compared with 93% effectiveness against Alpha
 - One dose only 33% protection
 - Even higher levels of effectiveness expected against hospitalization and death
-

Summary Talking Points Re Delta

Virus evolution is expected, and the more SARS-CoV-2 circulates, the more opportunities it has to evolve

Reducing transmission through established and proven disease control methods are crucial to reduce the occurrence of mutations that have negative public health implications

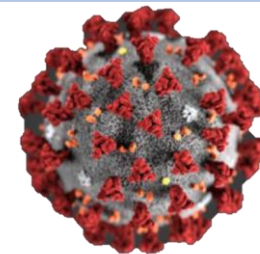
Authorities are encouraged to strengthen surveillance and sequencing capacities and apply a systematic approach to provide a representative indication of the extent of transmission of SARS-CoV-2 variants based on the local context, and to detect unusual events

Ensure vaccination, with new rationale for series completion

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